OIPE IAP87
NOV 20 2006
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Gaseous antirust film and its production process

Veröffentlichungsnr. (Sek.)	CN1344616
Veröffentlichungsdatum :	2002-04-17
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Anmelder :	SHENYANG ANTIRUST PACKING MATE (CN)
Veröffentlichungsnummer :	CN1344616
Aktenzeichen: (EPIDOS-INPADOC-normiert)	CN20010128199 20010925
Prioritätsaktenzeichen: (EPIDOS-INPADOC-normiert)	CN20010128199 20010925
Klassifikationssymbol (IPC) :	B32B27/30
Klassifikationssymbol (EC) :	
Korrespondierende Patentschriften	

Bibliographische Daten

The gaseous antirust film consists of two layers. The outer layer is linear low density polyethylene or superlow density polyethylene or their combination. The inner layer is mixture layer of low density polyethylene, gasified corrosion retardant VCI and stuffing and made through mixing, extrusion and blowing. The film is 10-200 microns in total thickness, the outer layer is 10-40 % thick of the total thickness and the inner layer 60-90 %. It is produced through the main steps of: selection of the outer layer resin, pre-treatment of the stuffing, the preparation of VCI material, selection of the inner layer resin, mixing with VCI material, feeding the mixed inner material to material bin of the extruder, feeding the outer layer polyethylene to outer material bin, extrusion and blowing at 140-190 deg.c to form cylindrical film, wind cooling and winding the produced gaseous antirust film. The film may be used widely in antirust packing of metal product.

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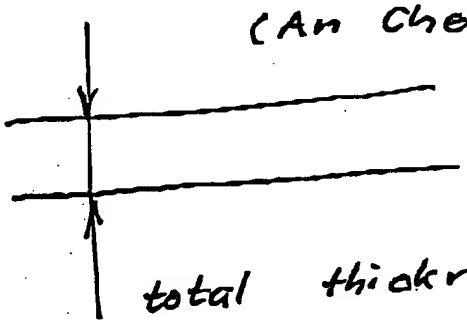
Enclosure - page 1

* Prior Art layer thickness
GM 1344616
(An Chengqiang et. al)



total thickness 10 - 200 microns

minimum thickness $d_{min} = 10\ \mu m$

d = thickness

* Prior Art density of backing layer
US 5,227,225
(Manish)

table 1

ρ_{PE} : LDPE 0,917 g/cm^3
- 0,923 -"-

HDPE 0,958 g/cm^3

maximum density $\rho_{max} = 0{,}958\ \frac{g}{cm^3}$
minimum density $\rho_{min} = 0{,}917\ \frac{g}{cm^3}$
ρ = density

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Enclosure – page 2

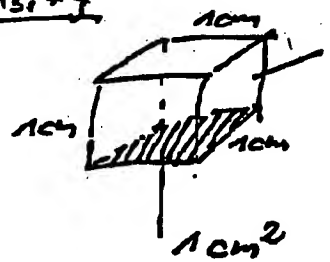
m = mass

V = volume

F = area

bwi = basis weight of impregnation

① definition Density ρ



1 cm³ ⇒ ρ_{max} prior art: 0,958 g (Nan:sh) ; ρ_{min}: 0,917 g

$$\rho = \frac{m}{V} = \frac{m}{F \cdot d}$$

$$\rho = \frac{bwi}{d}$$

with

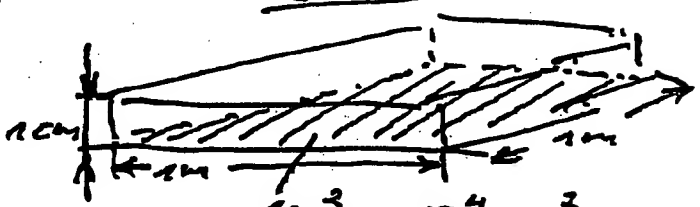
$$bwi = \frac{m}{F}$$

$$\boxed{bwi = \rho \cdot d}$$

$bwi_{min} = \rho_{min} \cdot d_{min}$

$bwi_{min} = 9,17\ g/m^2$

② 1 m²

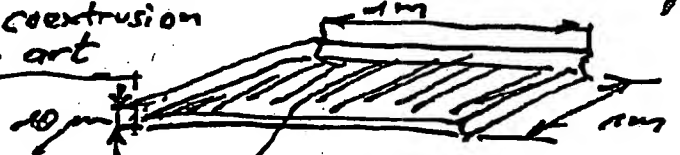


$1 m^2 = 10^4 cm^2$

③ 10 µm

ρ 170 g (min) ⇒ 9580 g (max)

d_{min} coextrusion prior art



$= 10^{-3}$ cm (Fa. Chengiang)

$1 m^2$ ⇒ 9,58 g (max)

9,17 g (min)

$\boxed{bwi = 9,58\ g/m^2}$ (closest to invention)

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